On the occurrence of a Superorbital chain of Bones in the Arboricolæ (Wood-partridges).—*By* James Wood-Mason *of Queen's College, Oxford.*

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(With Plate II).

In his elaborate paper 'On the Osteology of the Gallinaceous Birds and Tinamous' read before the Linnean Society on November 25th, 1862, Professor W. Kitchen Parker announced the remarkable discovery, in *Tinamus robustus*, "of a whole row of super-orbital bones, the like of which must be sought for, not amongst birds, but in a group of creatures a long way down in the scale," *viz.*, in the Skinks and Blind-worms. Further on in the same paper, the presence of a similar chain of superorbitals in *Psophia crepitans*, "only in an enfeebled form," is mentioned. The same author, in a memoir 'On the Structure and Development of the Skull in the Ostrich Tribe' read before the Royal Society on March 9th, 1865, records the occurrence of a double row of these bones extending all along the superorbital margin from the lacrymal to the post-frontal process in *Tinamus variegatus*.

I have now to announce the occurrence of a similar chain of ossicles in four out of the eight recognized species of *Arboricola*, a genus of Indian Partridges, *viz.*, in *A. torqueola*, *atrogularis*, *rufogularis*, and *intermedia*; and I look forward with especial interest to the examination of skulls of the two of the remaining species which have been referred by some authors to the subgenus *Peloperdix*, and which inhabit the Tenasserim provinces and the Malay peninsula.

Mr. Parker has pointed out how in the Lapwing (*Vanellus*) the frontal in the young bird sends out square denticles of bony substance under and beyond the nasal gland, which coalesce with one another, with the lachrymal in front, and with post-frontal process behind, so as to form beyond the gland a secondary frontal margin, which acts as a smooth eave to the eyeball; and that the superorbital chain of bones in the Tinamou takes the place of this secondary frontal margin and the denticles in the Lapwing, the same end being attained by different means. But in the Arboricolas the arrangement is totally different: in them the margins of the combined frontals so far from being bevelled or scooped for the reception of the nasal gland are rather prominent and the internal edges of the ossicles composing the chain come into close relation of apposition with them.

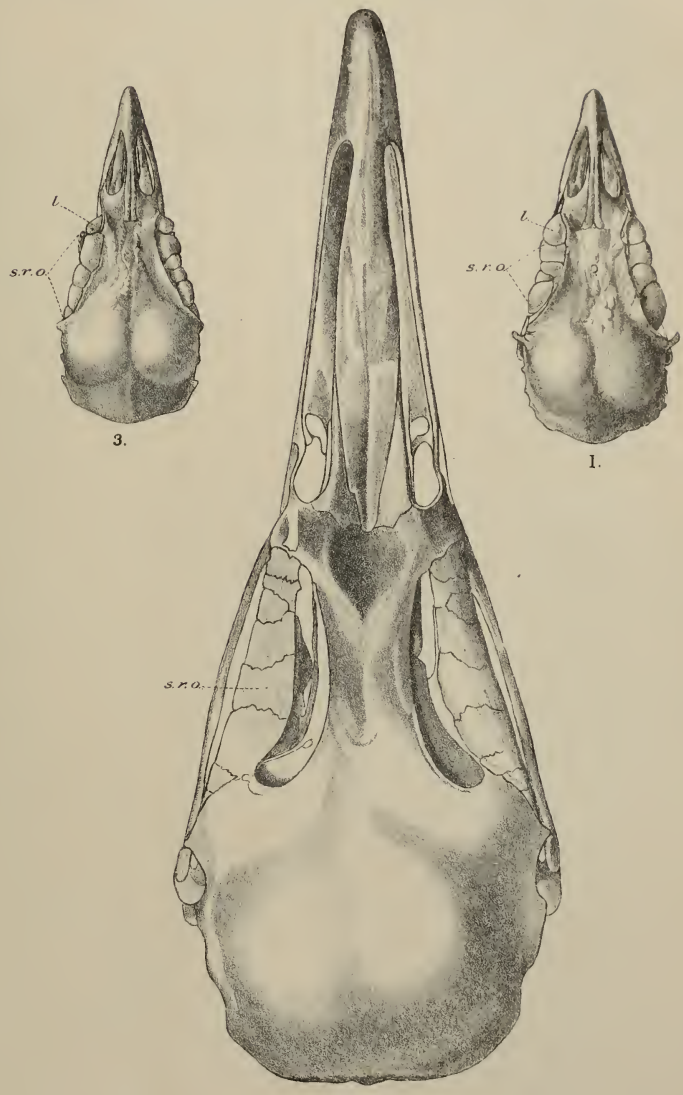
I have examined a considerable number of species of Gallinaceous birds, small and great, including, by the kindness of my friend Major Godwin-Austen, a species of *Bambusicola*, but have hitherto failed to detect so much as a single grain of bone in the superorbital membrane of any one of them.

The *Arboricolas*, I may add in conclusion, differ from all in not having the temporal fossa bridged by bone, the zygomatic process of the squamosal being quite rudimental.

Explanation of Plate II.

Fig. 1. Upper view of skull of *Arboricola rufogularis*, nat. size.
Fig. 2. Side view of the same skull, nat. size.
Fig. 3. Upper view of skull of a young individual of the same species, nat. size.
Fig. 4. Side view of the same skull, nat. size.
Fig. 5. Upper view of skull of *Tinamus robustus*, magnified two diameters. (After Parker).

Sro. Superorbital chain of ossicles; *l.* lacrymal; *p. o.* postorbital process; *s. o. m.* unossified portion of superorbital membrane.



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